

## Amendments to the Claims

1. **(Currently Amended)** A printer-to-be-connected for connecting to a host information processor via a given communication medium, the printer comprising:

    printer language specifications storage means for storing, under the control of an operating system operable on-said the host information processor, printer language specifications which-indicates indicate a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing the plot object on the printer;

    printer language specifications setting data generation means for reading-said the printer language specifications from said printer language specifications storage means to generate printer language specifications setting data predetermined therefor;

    language specifications setting data transmission processing start means for outputting-said the printer language specifications setting data generated by said printer language specifications setting data generation means with a predetermined timing; and

    bi-directional communication means for receiving-said the printer language specifications setting data for transmission to-said the host information processor.

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2. **(Currently Amended)** A printer-to-be-connected for connecting to a host information processor via a given communication medium, the printer comprising:

    control language specifications storage means for storing, under the control of an operating system operable on-said the host information processor, control language specifications which-indicates indicate a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for printing the plot object setting the control element on the printer;

    control language specifications setting data generation means for reading-said the control language specifications from said control language specifications storage means to generate control language specifications setting data predetermined therefor;

language specifications setting data transmission processing start means for outputting said the control language specifications setting data generated by said control language specifications setting data generation means with a predetermined timing; and

bi-directional communication means for receiving said the control language specifications setting data for transmission to said the host information processor.

3. **(Currently Amended)** The printer as claimed in claim 1, further comprising control language generation means for converting said the printer language specifications setting data generated by said printer language specifications setting data generation means into control language data in a predetermined format for output to said language specifications setting data transmission processing start means, wherein

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said language specifications setting data transmission processing start means outputs the control language data received from said control language generation means to said bi-directional communication means with a predetermined timing.

4. **(Currently Amended)** The printer as claimed in claim 2, further comprising control language generation means for converting said the control language specifications setting data generated by said control language specifications setting data generation means into control language data in a predetermined format for output to said language specifications setting data transmission processing start means, wherein

    said language specifications setting data transmission processing start means outputs the control language data received from said control language generation means to said bi-directional communication means with a predetermined timing.

5. **(Currently Amended)** The printer as claimed in claim 1, further comprising communication data determination means for determining the a type of communication data received from said the host information processor via said bi-directional communication means, wherein

    when said the communication data is data asking for said the printer language specifications setting data, said communication data determination means instructs said

printer language specifications setting data generation means to generate-said the printer language specifications setting data.

6. **(Currently Amended)** The printer as claimed in claim 2, further comprising communication data determination means for determining-the\_a type of communication data received from-said the host information processor via said bi-directional communication means, wherein

when-said the communication data is data asking for-said the control language specifications setting data, said communication data determination means instructs said control language specifications setting data generation means to generate-said the control language specifications setting data.

7. **(Currently Amended)** The printer as claimed in claim 5, further comprising control language interpretation means for further interpreting the predetermined control language data determined by said communication data determination means, wherein

when-said the printer language specifications setting data in the format of-said the control language data is asked for, said control language interpretation means instructs said printer language specifications setting data generation means to generate-said the printer language specifications setting data.

8. **(Currently Amended)** The printer as claimed in claim 6, further comprising control language interpretation means for further interpreting the predetermined control language data determined by said communication data determination means, wherein

when-said the control language specifications setting data in the format of-said the control language data is asked for, said control language interpretation means instructs said control language specifications setting data generation means to generate-said the control language specifications setting data.

9. **(Currently Amended)** The printer as claimed in claim 1, further comprising error detection means for specifying, when an error is observed on the printer, a printer

language command-caused causing the error (hereinafter, referred to as an error causing command), and

control language generation means for generating control language data in a predetermined format according to-said the error causing command for output to said bi-directional communication means.

10. **(Currently Amended)** The printer as claimed in claim 2, further comprising error detection means for specifying, when an error is observed on the printer, a control language command-caused causing the error (hereinafter, referred to as an error causing command), and

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control language generation means for generating control language data in a predetermined format according to-said the error causing command for output to said bi-directional communication means.

11. **(Currently Amended)** The printer as claimed in claim 1, further comprising error detection means for specifying, when an error is observed on the printer, a printer language command-caused causing the error (hereinafter, referred to as an error causing command), and

language specifications update means for updating, according to-said the error causing command, -said the printer language specifications stored in said printer language specifications storage means to prevent-said the host information processor from using said the error causing command.

12. **(Currently Amended)** The printer as claimed in claim 2, further comprising error detection means for specifying, when an error is observed on the printer, a control language command-caused causing the error (hereinafter, referred to as an error causing command), and

language specifications update means for updating, according to-said the error causing command, -said the control language specifications stored in said control language specifications storage means to prevent-said the host information processor from using-said the error causing command.

13. **(Currently Amended)** The printer as claimed in claim 3, further comprising printer settings change means for notifying said control language generation means of the details of a setting change made by a user on the printer, wherein

said control language generation means generates—said the control language data indicating—said the notified details of the setting change for output to said language specifications setting data transmission processing start means.

14. **(Currently Amended)** The printer as claimed in claim 4, further comprising printer settings change means for notifying said control language generation means of the details of a setting change made by a user on the printer, wherein

said control language generation means generates—said the control language data indicating—said the notified details of the setting change for output to said language specifications setting data transmission processing start means.

15. **(Currently Amended)** The printer as claimed in claim 11, further comprising printer settings change means for notifying said language specifications update means of the details of a setting change made by a user on the printer, wherein

said language specifications update means updates—said the printer language specifications according to—said the notified details of the setting change.

16. **(Currently Amended)** The printer as claimed in claim 12, further comprising printer settings change means for notifying said language specifications update means of the details of a setting change made by a user on the printer, wherein

said language specifications update means updates—said the printer language specifications according to—said the notified details of the setting change.

17. **(Currently Amended)** The printer as claimed in claim 3, further comprising device change detection means for notifying said control language generation means of the details of a structural change made by a user on the printer, wherein

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said control language generation means generates—said the control language data which indicates—said the notified details of the structural change for output to said language specifications setting data transmission processing start means.

18. **(Currently Amended)** The printer as claimed in claim 4, further comprising device change detection means for notifying said control language generation means of the details of a structural change made by a user on the printer, wherein

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said control language generation means generates—said the control language data which indicates—said the notified details of the structural change for output to said language specifications setting data transmission processing start means.

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19. **(Currently Amended)** The printer as claimed in claim 11, further comprising device change detection means for notifying said language specifications update means of the details of a structural change made by a user on the printer, wherein

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said language specifications update means updates—said the printer language specifications according to—said the notified details of the structural change.

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20. **(Currently Amended)** The printer as claimed in claim 12, further comprising device change detection means for notifying said language specifications update means of the details of a structural change made by a user on the printer, wherein

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said language specifications update means updates—said the printer language specifications according to—said the notified details of the structural change.

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21. **(Currently Amended)** A printer driver provided in a host information processor to be connected for connecting to a printer via a given communication medium, the printer driver comprising:

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bi-directional communication means for receiving communication data from—said the printer;

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communication data determination means for determining, under the control of an operating system operable on—said the host information processor, whether or not the communication data received by said bi-directional communication means is printer

language specifications setting data which indicates; a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing the plot object on the printer;

printer language specifications setting means for registering printer language specifications according to—said the printer language specifications setting data determined by said communication data determination means;

printer settings storage means for storing—said the printer language specifications according to the ~~registration processing~~ registering carried out by said printer language specifications setting means; and

printer language generation means for obtaining, according to the application print data at printing,—said the printer language corresponding to the plot object from said printer settings storage means to generate printer language print data for transmission to said the printer via said bi-directional communication means.

22. **(Currently Amended)** A printer driver provided in a host information processor ~~to be connected for connecting~~ to a printer via a ~~given~~ communication medium, the printer driver comprising:

bi-directional communication means for receiving communication data from—said the printer;

communication data determination means for determining, under the control of an operating system operable on—said the host information processor, whether or not the communication data received by said bi-directional communication means is control language specifications setting data which indicates; a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for setting the control element on the printer;

control language specifications setting means for registering control language specifications according to—said the control language specifications setting data determined by said communication data determination means;

printer settings storage means for storing-said the control language specifications according to the ~~registration processing~~ ~~registering~~ carried out by said control language specifications setting means; and

control language generation means for obtaining, according to the application print data at printing,-said the control language corresponding to the control element from said printer settings storage means to generate control language print data for transmission to-said the printer via said bi-directional communication means.

23. **(Currently Amended)** The printer driver as claimed in claim 21, further comprising control language interpretation means for further interpreting the ~~predetermined control language~~ printer language specifications setting data determined by said communication data determination means, wherein

A.1 when-said the printer language specifications setting data is in a format of-said control language data, said control language interpretation means instructs said printer language specifications setting means to register-said the printer language specifications.

24. **(Currently Amended)** The printer driver as claimed in claim 22, further comprising control language interpretation means for further interpreting the ~~predetermined control language~~ control language specifications setting data determined by said communication data determination means, wherein

when-said the control language specifications setting data is in a format of-said control language data, said control language interpretation means instructs said control language specifications setting means to register-said the control language specifications.

25. **(Currently Amended)** The printer driver as claimed in claim 21, further comprising printer setting data request generation means for generating requesting data asking-said the printer for transmission of-said the printer language specifications setting data, and transmitting the-same requesting data to said bi-directional communication means.

26. **(Currently Amended)** The printer driver as claimed in claim 22, further comprising printer setting data request generation means for generating requesting data asking-said

~~the printer for transmission of said the control language specifications setting data, and transmitting the same requesting data to said bi-directional communication means.~~

**27. (Currently Amended)** The printer driver as claimed in claim 21, wherein ~~said the~~ printer language specifications stored in said printer settings storage means ~~is are~~ provided with, in addition to the correspondence between ~~said the~~ plot object and ~~said the~~ printer language, link information indicating whether or not there is ~~an other~~ ~~another~~ plot object ~~being~~ equivalent in drawing to ~~said the~~ plot object,

~~the printer device further comprises printer error information registration means for registering in said printer settings storage means, according to a printer language command causing an error observed on ~~said the~~ printer (hereinafter, referred to as an error causing command), printer error information which indicates a plot object using the error causing command ~~that causes an the~~ error at printing ~~is further provided~~, and~~

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~~said printer language generation means refers to ~~said the~~ printer error information and ~~said the~~ link information stored in said printer settings storage means, and then replaces the plot object causing the error on ~~said the~~ printer with ~~an other~~ ~~another~~ plot object linked thereto for generation of ~~said the~~ printer language print data.~~

**28. (Currently Amended)** The printer driver as claimed in claim 22, wherein ~~said the~~ control language specifications stored in said printer settings storage means ~~is are~~ provided with, in addition to the correspondence between ~~said the~~ control element and ~~said the~~ control language, link information indicating whether or not there is ~~an other~~ ~~another~~ control element ~~being~~ equivalent to ~~said the~~ control element,

~~the printer device further comprises printer error information registration means for registering in said printer settings storage means, according to a control language command causing an error observed on ~~said the~~ printer (hereinafter, referred to as an error causing command), printer error information which indicates a control element using the error causing command ~~that causes the an~~ error at printing ~~is further provided~~, and~~

~~said control language generation means refers to ~~said the~~ printer error information and ~~said the~~ link information stored in said printer settings storage means, and then~~

replaces the control element causing the error on-said the printer with-an-other another control element linked thereto for generation of-said the control language print data.

29. **(Currently Amended)** The printer driver as claimed in claim 27, wherein, when said the printer error information is provided from-said the printer, said communication data determination means further determines the printer error information received via said bi-directional communication means for output to said printer error information registration means.

30. **(Currently Amended)** The printer driver as claimed in claim 28, wherein, when said the printer error information is provided from-said the printer, said communication data determination means further determines the printer error information received via said bi-directional communication means for output to said printer error information registration means.

31. **(Currently Amended)** The printer driver as claimed in claim 29, further comprising control language interpretation means for further interpreting the printer language specifications setting data determined by said communication data determination means, wherein,

\_\_\_\_\_ when-said the printer error information provided from-said the printer is in-the a format of-the control language data, said control language interpretation means further interprets the control language data to extract-said the printer error information therefrom for output to said printer error information registration means.

32. **(Currently Amended)** The printer driver as claimed in claim 30, further comprising control language interpretation means for further interpreting the control language specifications setting data determined by said communication data determination means, wherein,

\_\_\_\_\_ when-said the printer error information provided from-said the printer is in-the a format of-the control language data, said control language interpretation means further

interprets the control language data to extract said the printer error information therefrom for output to said printer error information registration means.

33. **(Currently Amended)** The printer driver as claimed in claim 21, further comprising, ~~when information in said printer settings storage means is set or updated,~~ data for printer settings display generation means for, ~~when information in said printer settings storage means is set or updated,~~ reading the information to generate display data corresponding thereto, and

printer settings display means for performing information display by ~~means of~~ an arbitrary display medium according to said the display data generated by said data for printer settings display generation means.

34. **(Currently Amended)** The printer driver as claimed in claim 22, further comprising, ~~when information in said printer settings storage means is set or updated,~~ data for printer settings display generation means for, ~~when information in said printer settings storage means is set or updated,~~ reading the information to generate display data corresponding thereto, and

printer settings display means for performing information display by ~~means of~~ an arbitrary display medium according to said the display data generated by said data for printer settings display generation means.

35. **(Currently Amended)** A printer driver program recorded on a recording medium on which a printer driver program to be run on a computer device ~~is recorded~~ for realizing an operational environment on the computer device, the printer driver program being operable to cause the computer device to: ~~comprising the steps of:~~

receive receiving communication data from a printer;  
determine, determining, under the control of an operating system operable on a host information processor, whether or not said the communication data is printer language specifications setting data which indicates a correspondence between a plot object forming application print data generated at printing by an application operable on the host information processor and a printer language for printing the plot object on the printer;

register registering printer language specifications according to said the determined printer language specifications setting data; and

generate generating, with the application print data at printing, printer language print data for transmission to said the printer according to said the printer language corresponding to said the registered plot object.

36. **(Currently Amended)** A printer driver program recorded on a recording medium ~~on which a printer driver program~~ to be run on a computer device ~~is recorded~~ for realizing an operational environment on the computer device, the printer driver program operable to cause the computer device to comprising the steps of:

receive receiving communication data from a printer;

determine determining, under the control of an operating system operable on a host information processor, whether or not said the communication data is control language specifications setting data which indicates a correspondence between a control element forming application print data generated at printing by an application operable on the host information processor and a control language for setting the control element on the printer;

register registering control language specifications according to said the determined control language specifications setting data; and

generate generating, with the application print data at printing, control language print data for transmission to said the printer according to the correspondence between said the registered control element and said the control language.

37. **(Currently Amended)** The recording medium printer driver program as claimed in claim 35, further operable to cause the computer device to comprising the step of further interpreting interpret the printer language specifications predetermined control language setting data determined in said determination-step operation, wherein

when said the printer language specifications setting data is in a format of said control language data, said the printer language specifications ~~is~~ are registered in said interpretation-step operation.

38. **(Currently Amended)** The recording medium printer language program as claimed in claim 36, further comprising the step of further interpreting operable to cause the computer device to interpret the predetermined control language printer language specifications setting data determined in said determination-step operation, wherein

when said the control language specifications setting data is in a format of said the control language data, said the control language specifications is are registered in said interpretation-step operation.

39. **(Currently Amended)** The printer driver program-recording medium as claimed in claim 35, further comprising the step of generating and transmitting operable to cause the computer device to generate and transmit requesting data asking said the printer for transmission of said the printer language specifications setting data.

40. **(Currently Amended)** The recording medium printer driver program as claimed in claim 36, further comprising the step of generating and transmitting operable to cause the computer device to generate and transmit requesting data asking said the printer for transmission of said the control language specifications setting data.

41. **(Currently Amended)** The recording medium printer driver program as claimed in claim 35, wherein said the registered printer language specifications is are provided, in addition to the correspondence between said the plot object and said the printer language, with link information which indicates whether or not there is an other another plot object being equivalent in drawing to said the plot object,

the printer driver program is further operable to register step of registering, according to a printer language command causing an error observed on said the printer (hereinafter referred to as an error causing command), printer error information which indicates that a plot object using the error causing command causes an the error at printing is further provided, and

in-said generation-step operation refers to, said the registered printer error information and said the link information are referred to, and then replaces the plot object

causing the error on-said the printer is replaced with-an other another plot object linked thereto to generate-said the printer language print data.

42. **(Currently Amended)** The printer driver program-recording medium as claimed in claim 36, wherein-said the registered control language specifications is provided, in addition to the correspondence between-said the control element and-said the control language, with link information which indicates whether or not there is-an other another control element-being equivalent to-said the control element,

the printer driver program is further operable to register-step of registering, according to a control language command causing an error observed on-said the printer (hereinafter, referred to as an error causing command), printer error information which indicates a control element using the error causing command causes-an the error at printing is further provided, and

in-said generation-step operation refers to the, said registered printer error information and-said the link information are referred to, and then replaces the control element causing the error on-said the printer-is replaced with-an other another control element linked thereto to generate-said the control language print data.

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43. **(Currently Amended)** The printer driver program-recording medium as claimed in claim 41, wherein, when-said the printer error information is provided from-said the printer, in said determination-step operation, the printer error information is further determined.

44. **(Currently Amended)** The recording medium printer device program as claimed in claim 42, wherein, when-said the printer error information is provided from-said the printer, in said determination-step operation, the printer error information is further determined.

45. **(Currently Amended)** The printer driver program-recording medium as claimed in claim 43, further operable to cause the computer device to interpret the printer language specifications setting data determined in said determination operation, wherein,

\_\_\_\_\_ when-said the printer error information provided from-said the printer is in-the\_a format of-said control language data,—in said interpretation-step, operation further interprets the control language data-is further interpreted to extract-said the printer error information therefrom.

46. **(Currently Amended)** The-recording-medium printer driver program as claimed in claim 44, further operable to cause the computer device to interpret the printer language specifications setting data determined in said determination operation, wherein,

\_\_\_\_\_ when-said the printer error information provided from-said the printer is in-the\_a format of-said control language data,—in said interpretation-step operation further interprets, the control language data-is further interpreted to extract-said the printer error information therefrom.

47. **(Currently Amended)** The-recording-medium printer driver program as claimed in claim 35, further comprising the steps of operable to cause the computer device to:

generating generate, when-said registered information is set or updated, display data corresponding to the information after reading the same information as appropriate; and

performing perform information display by-means-of an arbitrary display medium according to-said the display data.

48. **(Currently Amended)** The-recording-medium printer driver program as claimed in claim 36, further operable to cause the computer device to comprising the steps of:

generating generate, when-said registered information is set or updated, display data corresponding to the information after reading the same information as appropriate, and

performing perform information display by-means-of an arbitrary display medium according to-said the display data.